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OF PERTUSSIS

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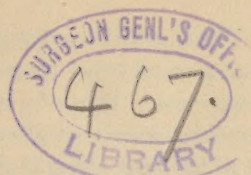
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BROMOFORM IN THE TREATMENT OF PERTUSSIS.

By E. J. MELLISH, M.D.

Pertussis has been known as a distinct disease for more than three centuries, having been first described by Baillou, a Frenchman, in the year 1578, yet, little has been accomplished, until recent years, towards mitigating its severity or shortening its course.

The mortality rate is high, much higher, probably, than the majority of physicians, even, imagine.

During the eighteenth century pertussis increased rapidly. In Sweden, from the year 1749 to the year 1764, according to Rosenstein, more than 43,000 children died of it. During the present century it has become a disease of nearly, if not all, races and climates. In Sweden, from 1862 to 1881, there were 86,000 deaths from this disease, according to the official returns. In England and Wales, from 1848 to 1855 the mortality was 72,000, and from 1858 to 1867 it was 120,000. In England, in the year 1876, nearly two per cent. of the total mortality from all causes was due to pertussis, and in 1880, in the same country, the proportion of deaths from this disease was 2.59 per cent. In Prussia, from 1875 to 1880, there were 85,000 deaths from it. Wylde stated in 1845¹ that pertussis ranked fifth on the list of death causes.

The duration of the first, or prodromal, stage of pertussis is generally ten days or two weeks, but it varies markedly; in some cases being only three to six days, in others as much as forty to forty-five days. The duration of the second, or paroxysmal, stage is also variable, the average being from four to eight weeks. The third, or stage of decline, lasts, usually, from two to three weeks, but may be prolonged by returns of the paroxysmal cough.

Pertussis, then, runs a course of from two to three months, when uninfluenced by treatment; a duration of less than six weeks is rare; one of more than three months less so. Let us assume the average to be ten weeks.

Now, what can we do with bromoform? Within the last year I have treated over one hundred cases with this agent and have records of seventy, taken consecutively. Of these I will describe, somewhat in detail, every twelfth case, taken in the order of their occurrence, as being a fair average of all. Forty-seven of the seventy were girls.

¹ Edinburgh Medical and Surgical Journal.

Case XII. Girl aged eight years; had been coughing seven or eight days; paroxysms frequent and violent, often causing emesis; marked anorexia. Bromoform, 7 to 8 drops three or four times a day. Improvement commenced after six or seven days, and she was practically well at the beginning of the fourth week of treatment.

Case XXIV. Boy seven weeks old; had been coughing one week; paroxysms frequent. Under treatment, after eight or nine days, the paroxysms became less frequent and severe, but his strength had gradually failed and symptoms of cerebral trouble appeared, retraction of head, spasms, etc. These symptoms continued till the nineteenth day, when they became much less marked; the cough had nearly ceased and he appeared to be a little stronger. This condition lasted two days; then the cerebral symptoms returned, death supervening on the twenty-third day. No bromoform was given the last two or three days. Whisky was given during the whole period of treatment.

Case XXXVI. Girl aged seven years; had been coughing five or six days; had pertussis four or five years ago; paroxysms frequent, especially at night. Cough syrup with morphia and belladonna afforded no relief. After the first dose of bromoform she slept all night the first time for several nights; no cough after the fifth or sixth day.

Case XLVIII. Girl aged seven years; had coughed two weeks, paroxysms occurring three or four times an hour; marked anorexia and anæmia. Under bromoform, she commenced to improve after seven or eight days and was well at the end of three weeks from beginning of treatment.

Case LX. Girl aged eleven months; had suffered from bronchitis and diarrhoea nearly ever since birth and was correspondingly puny. Had had pertussis about two weeks, when I was called. Under bromoform, there was no improvement; on the sixth day broncho-pneumonia developed; she died on the tenth day after commencement of treatment.

To sum up: In the series of seventy cases, of those who had coughed not more than one week before beginning the bromoform treatment, 7 improved in 3 days or less; 15 in from 4 days to a week, and one in 8 or 9 days. Of these, one was well in 7 days; 1 in 12 days; 1 in 14 days; 2 in 18 days; 9 in 21 days and 8 in from 23 to 28 days. One died.²³ Of those who had been coughing from 1 to 2 weeks, 2 improved in three days or less; 14 in from four days to a week; 8 in from 1 to 2 weeks; 1 failed to improve. Of these, 1 was well in 14 days; 2 in 17 days; 6 in 21 days; 8 in from 24 to 30 days; 1 in 35 days; 1 in 38 days; 3 passed from notice before complete recovery; 3 died—25. Of those who had been coughing from 2½ to 3 weeks, 5 improved in 3 days or

less, 6 in from 4 days to a week and 3 in 10 or 11 days. Of these, 6 were well in from 10 to 15 days; 3 in from 15 to 20 days; 3 in from 22 to 28 days; 1 in 62 days; one passed from notice before quite well—14. Of those who had been coughing from 4 to 5 weeks, 1 improved the first day; 1 the third day and three on the fifth day. All were well in from 10 to 18 days—5. One had been coughing 8 weeks, improved on the first day and was well in 14 days; 1 had coughed 11 weeks, improved on the fifth day and was well in 28 days; 1 had coughed 12 weeks, improved on the first day and was well in 9 days—3.

Leaving out the 4 cases lost track of and the 4 that died, the average time of sickness, preceding the administration of bromoform, in the remaining 62 cases was 16 days; the average time elapsing from beginning of the treatment to recovery was 21 days. This gives an average course 37 days, the average course without treatment being about 70 days.

Of those who died, the first, case 24, was an infant aged seven months, the case a severe one from the beginning. The second, case 41, sixteen months old, was, before and during the course of the disease, very ill from teething, cutting four molars and the canines nearly simultaneously. She developed spasms and other symptoms of cerebral trouble early and they continued to the end. The third, case 52, an infant aged nine months, in the poorest of hygienic surroundings; the case was exceptionally severe from the beginning; had been ill two weeks when I was called and did not receive the medicine regularly at any time, once being a week without it. The fourth, case 60, was a girl aged eleven months; had been ill nearly ever since her birth and had pertussis nearly two weeks before I was called.

Besides these 70 cases, I have employed the bromoform treatment in some 40 or 50 others, of which I have no records. None of them died, to my knowledge, and the treatment appeared to be as favorable as in the above cases.

These figures speak for themselves. Most of the cases were in families occupying the lower walks of life, many of them surrounded by poor hygienic conditions. The few whose surroundings were very good improved, I think, more rapidly than the others, but their number was too small to base a conclusion upon. In many instances the medicine was given irregularly and treatment prolonged in consequence. Therefore, I am of the opinion that, under favorable circumstances, a better record than the above could be made with this agent. Even were the course of the disease not curtailed, the amelioration of symptoms is so marked that this alone would render the treatment with bromoform valuable. Bromoform should be given until the

cough has entirely ceased, otherwise relapse is likely to occur. Toward the end the dosage may be reduced.

Bromoform, $C. H. Br_3$, is a colorless, limpid liquid, analagous to chloroform, the three atoms of bromine in the former taking the place of the three atoms of chlorine in the latter; its specific gravity is 2.9, or more than twice that of chloroform; it is easily soluble in alcohol, very poorly so in water; it has a sweetish, agreeable taste and does not affect the mucous membrane of the mouth. Owing to its extreme volatility and discoloration when exposed to light, heat and air, it should be well stoppered and kept in a cool, dark place, or may be dispensed in dark bottles.

Dr. Stepp, of Neuremberg², was the first to advocate its use in pertussis. The best mode of administration is one recommended by him, as follows: Drop the bromoform into a teaspoonful of water; it sinks to the bottom of the liquid and collects there in the form of a pearl. On administering the dose, care must be taken that the bromoform pearl really goes into the mouth of the patient. It is swallowed with the water and if a swallow of water be taken after the taste left is scarcely perceptible.

The dosage of bromoform is usually: For children three to four weeks old, 1 drop three or four times a day; for children up to one year old, 2 or 3 drops three or four times a day. In the main I have adhered to this dosage, but latterly found that smaller doses, repeated every two or three hours, night and day if necessary, appeared to give better results. In some cases I gave larger doses than those recommended above, and consider it safe to do this when the case is in intelligent hands. I noticed no bad symptoms in my cases which could be traced to the bromoform. In one case, however, the dosage was reduced on account of drowsiness occurring soon after taking.

ISHPEMING, MICH.

² Deutsche Medicinische Wochenschrift, Nos. 31 and 44, 1889.

